

Appl. No.: 10/017,924
Attorney Docket No. 10541-775
Reply to Office Action of January 11, 2005

II. Listing of the Claims:

1. (Currently amended): An assembly having a driving member and a driven member comprising:

the driving member having a first polygonal interface, said first polygonal interface having at least one surface selected from the group consisting of concave and convex surfaces; and

the driven member having a second polygonal interface having at least one surface corresponding to said first polygonal interface,

wherein one of the first and second polygonal interfaces includes a first straight segment, a second straight segment, and a twisted segment positioned between the first and second straight segments wherein, the first segment, the second segment, and the twisted segment are all unitarily formed integral to said one of the first and second polygonal interfaces and all engage the other one of the first and second polygonal interfaces.

2 - 4. (Cancelled).

5. (Previously Presented): The assembly of Claim 1 wherein the driven member comprises a shaft having a male polygonal length, wherein the twisted segment is twisted from about 0° 20' to about 0° 50'.

6. (Previously Presented): The assembly of Claim 1 wherein one of the driving member and the driven member is straight.

Appl. No.: 10/017,924
Attorney Docket No. 10541-775
Reply to Office Action of January 11, 2005

7. (Previously Presented): The assembly of Claim 1 wherein the first polygonal interface has a relative eccentricity of from about 1.5% to about 4%.

8. (Previously Presented): The assembly of Claim 1 wherein the driven member comprises a shaft having a concave male polygonal interface with a number of sides selected from the group consisting of 3 to 12.

9. (Currently Amended): A method of interfacing a driving member with a driven member, the method comprising:

providing a driving member with a first polygonal interface and a driven member with a second polygonal interface, wherein one of the first and second polygonal interfaces has a first straight segment, a second straight segment, and a twisted segment positioned between the first and second straight segments wherein, the first segment, the second segment, and the twisted segment are all unitarily formed integral to said one of the first and second polygonal interfaces and all engage the other one of the first and second polygonal interfaces and the twisted segment is twisted from about $0^{\circ} 10'$ to about 1° between the two straight segments along an axis of the assembly; and

joining the driving member with the driven member.

10. (Previously Presented): The method of Claim 9 wherein the driven member comprises a shaft and the driving member comprises a flange.

Appl. No.: 10/017,924
Attorney Docket No. 10541-775
Reply to Office Action of January 11, 2005

11. (Previously Presented): The method of Claim 9 wherein the driven member comprises a shaft having a male polygonal interface.

12. (Previously Presented): The method of Claim 9 wherein the driven member comprises a shaft having a male polygonal interface, wherein the twisted segment is twisted from about $0^{\circ} 20'$ to about $0^{\circ} 50'$.

13. (Original): The method of Claim 9 wherein the driving member and the driven member comprise one of a group consisting of a compressor, a pump, a machine tool, a mechanical drive, a generator, and a motor.

14. (Currently Amended): A coupling for an automotive drive shaft, the coupling comprising:

a shaft having a first polygonal interface, said first polygonal interface selected from the group consisting of concave, convex and straight surfaces; and

a mounting device having a second polygonal interface, wherein one of the first and second polygonal interfaces includes a first straight segment, a second straight segment, and a twisted segment positioned between the first and second straight segments wherein, the first segment, the second segment, and the twisted segment are all unitarily formed integral to said one of the first and second polygonal interfaces and all engage the other one of the first and second polygonal interfaces;

the twisted segment being twisted from about $0^{\circ} 10'$ to about 1° between two straight portions.

Appl. No.: 10/017,924
Attorney Docket No. 10541-775
Reply to Office Action of January 11, 2005

15. (Original): The coupling of Claim 14 wherein the mounting device comprises a flange.

16. (Previously Presented): The coupling of Claim 14 wherein the first polygonal interface comprises a male polygonal length with the twisted segment being twisted from about 0° 20' to about 0° 50'.

17. (Previously Presented): The coupling of Claim 14 wherein the first polygonal interface has a relative eccentricity of from about 1.5% to about 4%.

18. (Original): The coupling of Claim 14, wherein one of the shaft and the mounting device are straight.

19. (Previously presented): The coupling of Claim 14 wherein the shaft has a concave male polygonal length with a number of sides selected from the group consisting of 3 to 12.

20-33. (Cancelled).